#### 10 INDEX

#### Affected Environment

1-30, 3-1, 3-13, 3-52, 7-3, 8-3, B-16, (Appendix C Report, 11), F-36, F-37

#### Air Quality

2-4, 2-30, 2-38, 2-57, 3-5, 3-7 through 10, 3-43, 3-46 through 49, 5-5, 5-6, 5-14, 5-15, 5-27, 5-28, 5-34 through 36, 5-43 through 46, 5-76 through 80, 5-93, 5-116, 5-122, 5-124, 5-127, 5-131, 5-140, 6-4, 6-5, 7-7, 7-12, 7-13, 8-1, 9-1, 9-2, 9-4, 9-10, (Appendix C Report, 3, 22), (Appendix D Report, 7, 12, 16), F-33, F-34, F-39, F-44, F-48

## Air Quality and Noise

2-38, 2-57, 5-14, 5-27, 5-34, 5-43, 5-76, 5-116, (Appendix D Report, 7, 12), F-33

#### Alternatives

1-6, 1-7, 1-15 through 18, 1-21, 1-26, 1-28, 1-32, 2-1, 2-2, 2-4, 2-6, 2-25 through 31, 2-33 through 35, 2-37 through 43, 2-45, 2-46, 2-49, 2-71, 3-37, 3-73, 4-1 through 3, 4-5, 4-11, 4-13, 5-1, 5-32, 5-59, 5-60, 5-89, 5-93, 5-122 through 130, 5-133 through 137, 6-14, 9-13, 9-14, B-17, B-18 (Appendix C Report, iii, 1 through 3, 9, 20, 21, 23), (Appendix D Report, 2, 9), E-9, F-3, F-7, F-14, F-35, F-36, F-40, F-42, F-44 through 46)

#### **Background Information**

1-2, 1-32, 4-1, 4-2, 5-59, (Appendix C Report, 2), (Appendix D Report, 2)

# **Biotic Resources**

3-17, 3-56, 6-12

#### **Breached Cylinders**

2-3, 2-4, 2-28, 2-31, 3-12, 3-51, 5-4, 5-5, 5-7, 5-8, 5-14, 5-16, 5-17, 5-20, 5-21, 5-27, 5-29, 5-30, 5-38, 5-39, 9-11

## Chemical Environment

3-22, 3-57

#### Comparison of Alternatives

2-1, 2-28

#### Contractor Disclosure Statement

1-33, 8-1, H-1, H-3

#### **Cultural Resources**

1-21, 2-29, 2-30, 2-42, 2-46, 2-67, 3-36, 3-72, 5-18, 5-31, 5-41, 5-58, 5-89, 5-93, 5-118, 5-123, 5-129, 5-131, 6-13, 6-14, 7-9, 7-11, 7-13, 8-2, 8-3, 9-4, (Appendix C Report, 15), (Appendix D Report, 7, 12, 15), F-43

#### **Cumulative Impacts**

1-17, 1-24, 1-26, 1-29, 1-32, 2-44 through 47, 5-1, 5-80, 5-114, 5-119 through 123, 5-125 through 130, 8-2, 8-3, 9-4, (Appendix C Report, 3, 13, 22), F-45, F-46, F-48

### Cylinder Inventory

1-2, 1-10, 1-17, 2-3, 2-15, 2-23, 2-30, 4-3, B-3, B-5, B-15, (Appendix C Report, iii, 11), F-13

## Cylinder Preparation

1-23, 1-30, 2-21, 2-43, 2-67, 5-130, 5-90, 5-91 through 93, 7-8, 9-4, (Appendix D Report, 22), F-7, F-8, F-49

#### Cylinder Yards

1-4, 1-5, 2-28, 2-49 through 51, 3-3, 3-4, 3-22, 3-23, 3-39, 3-51, 3-57, 5-33, 5-43, 5-62, 5-63, 5-130, B-17, (Appendix C Report, 14, 19), (Appendix D Report, 4)

## Decontamination and Decommissioning (D&D)

1-1, 1-13, 1-14, 1-18, 1-32, 2-2, 2-5, 2-30, 2-44, 2-69, 2-70, 3-39, 5-1, 5-119, 5-125, 5-126, 5-134, 5-136, 5-138 through 142, (Appendix C Report, 1, 3, 8, 14, 15, 18, 21), (Appendix D Report, 7, 10)

# Depleted Uranium Hexafluoride Management Program

1-30, 7-7, 7-8, B-19, (Appendix D Report, 22), F-48, F-49

#### **Ecology**

2-4, 2-30, 2-40, 2-63, 5-5, 5-17, 5-30, 5-39, 5-50, 5-85, 5-118, 5-122, 5-128, 8-3, (Appendix D Report, 7, 12), F-39

#### **Environmental Impacts of Alternatives**

5-1

#### **Environmental Justice**

1-21, 2-30, 2-42, 2-46, 2-67, 3-37, 3-73, 5-19, 5-32, 5-41, 5-42, 5-59, 5-90, 5-118, 5-123, 5-129, 7-2, 8-2, 9-6, (Appendix C Report, 4, 14, 22), E-11, F-44, F-45, F-47

## Housing

2-40, 3-30, 3-65, 3-66, 5-17, 5-30, 5-39, 5-49, 5-50, 5-84, 5-117, 5-129, 7-14, 9-14, (Appendix C Report, 4, 22), (Appendix D Report, 14), F-36, F-38, F-44, F-51

#### Human Health and Safety

1-21, 1-23, 2-4, 2-30, 2-31, 2-35, 2-49, 2-51, 2-55, 2-70, 5-5 through 7, 5-19, 5-20, 5-32 through 34, 5-42, 5-43, 5-59, 5-64, 5-114, 5-115, 5-126, 5-138, 5-139, (Appendix C Report, 13), (Appendix D Report, 7, 12, 13, 17, 19), F-3, F-12, F-21

# Irreversible and Irretrievable Commitment of Resources

5-1, 5-119, 5-134

#### Land Use

2-30, 2-42, 2-46, 2-66, 3-34, 3-70, 4-2, 5-18, 5-31, 5-40, 5-41, 5-57, 5-88, 5-89, 5-118, 5-122, 5-129, 5-134, 8-2, (Appendix D Report, 7, 9, 12, 14), F-42, F-43

#### List of Preparers

8-1

#### Low-Level Mixed Waste

9-9, 9-10, B-14

#### Low-Level Waste

1-28, 2-44, 5-142, 6-10, 7-4, 9-7, 9-9, (Appendix C Report, 3, 22), (Appendix D Report, 6)

## Minority and Low-Income Populations

2-43, 5-41, 5-42, 5-59, 5-90, 5-118, 5-129, F-44, F-45

#### Mitigation

1-32, 2-40, 2-42, 5-1, 5-41, 5-53, 5-58, 5-84, 5-93, 5-119, 5-129, 5-130 through 132, (Appendix D Report, iii, 9, 10, 15, 16), F-46

#### No Action Alternative

1-2, 1-8, 1-11, 1-14, 1-17, 1-18, 1-28, 2-1, 2-3, 2-4, 2-28 through 32, 2-35, 2-38 through 42, 2-45, 2-71, 4-1, 4-3, 5-1 through 4, 5-6, 5-7, 5-9, 5-11, 5-13 through 20, 5-22, 5-24, 5-26 through 32, 5-38, 5-92, 5-123, 5-125 through 130, 7-9, 7-12, (Appendix C Report, 3, 21), F-3, F-7, F-8, F-12, F-14, F-35, F-36, F-42 through 44

#### Nonradioactive Hazardous and Toxic Waste

3-34, 3-69

#### Normal Operations

2-17, 2-30, 2-55, 2-67, 2-71, 4-1, 4-10, 5-7, 5-19, 5-20, 5-59, 5-61, 5-63, 5-64, 5-82, 5-83, 5-91, 5-93, 5-114, 5-115, 5-126 through 128, 8-1, 9-11, B-7, (Appendix D Report, 7, 12, 13, 17), F-5, F-9, F-10, F-26, F-35

## Paducah Site

1-1, 1-4, 1-5, 1-7, 1-8, 1-10, 1-13, 1-18, 1-31 through 33, 2-1, 2-3, 2-16, 2-24 through 26, 2-47, 5-5, 5-16, 5-29, 5-114, B-15, B-17 through 19, C-3, (Appendix C Report, 2, 7, 14, 15, 20, 21), (Appendix D Report, 22), F-49

#### Pollution Prevention and Waste Minimization

1-32, 5-1, 5-120, 5-136, 5-137

### Polychlorinated Biphenyls (PCBs)

1-13, 1-33, 2-15, 2-16, 2-42, 3-13, 3-14, 3-33, 3-34, 3-69, 3-70, 5-132, 6-10, 9-12, B-3, B-15 through 19, D-8

#### Preferred Alternative

1-22, 1-28, 2-6, 2-7, 2-48, 5-43, 5-51, 5-126, (Appendix C Report, 2, 9, 21)

#### **Proposed Action**

1-7, 1-11, 1-13, 1-15, 1-18, 1-19, 1-22, 1-26 through 28, 2-1, 2-2, 2-4, 2-17, 2-28 through 30, 2-45, 2-49, 2-50, 2-67, 3-1, 3-37, 3-73, 4-1, 5-1, 5-32, 5-58, 5-119, 5-123, 5-126, 6-14, 9-5, 9-10, 9-13, B-3, B-6, B-7, B-11, B-14, B-17, B-18, (Appendix C Report, 22)

# Public and Occupational Safety and Health

3-22, 3-57

#### **Public Finances**

2-40, 5-17, 5-30, 5-39, 5-50, 5-84, (Appendix D Report, 14)

#### Purpose and Need

1-13, (Appendix C Report, 20)

#### **Radiation Environment**

3-22, 3-57, 5-6, 5-19

#### References

1-33, 7-1, 8-3, B-3, B-18, (Appendix D Report, iii, 22), E-17, F-46

#### Regional Economic Activity

F-36

# Relationship between Short-Term Use of the Environment and Long-Term Productivity 1-32, 5-1, 5-119, 5-136

#### Relationship to Other NEPA Reviews

1-25

#### Resource Requirements

1-21, 2-30, 2-42, 2-66, 5-18, 5-31, 5-40, 5-56, 5-88, 5-114, 5-118, (Appendix D Report, 7, 12, 14), F-42

#### Seismic Risk

3-11, 3-50

#### Site Infrastructure

3-3, 3-42

## Socioeconomics

1-21, 2-30, 2-39, 2-61, 3-25, 3-61, 5-4, 5-17, 5-30, 5-39, 5-49, 5-84, 5-117, 5-129, 5-141, (Appendix C Report, 14), (Appendix D Report, 7, 12, 14), F-35, F-44, F-45

# Solid Nonhazardous, Nonradioactive Waste 3-34, 3-69

#### Surface Water

2-4, 2-16, 2-39, 2-59, 2-71, 3-1, 3-13, 3-14, 3-18, 3-19, 3-24, 3-52 through 55, 3-60, 5-5, 5-8, 5-15 through 17, 5-21, 5-28 through 30, 5-37 through 39, 5-48, 5-49, 5-53, 5-63, 5-82, 5-85, 5-117, 5-122, 5-128, 5-130, 6-7, 9-12, B-16, B-17, (Appendix C Report, 3, 22), (Appendix D Report, 13), F-4, F-6, F-7, F-35, F-39

# Threatened and Endangered Species

2-40, 3-21, 3-57, 5-50, 5-55, 5-86, 6-12, 7-4, 9-3, (Appendix C Report, 4, 22), (Appendix D Report, 10), F-39, F-40

#### **Transportation**

1-1, 1-8, 1-10, 1-14, 1-17 through 19, 1-23, 1-25, 1-27, 1-29 through 31, 2-2, 2-5, 2-17 through 21, 2-23, 2-27, 2-30, 2-34 through 38, 2-43, 2-45, 2-55, 3-3, 3-26 through 28, 3-36, 3-41, 3-42, 3-62 through 64, 4-1, 4-2, 4-5, 4-6, 4-10, 5-14, 5-27, 5-32, 5-60, 5-88, 5-90, 5-91, 5-93, 5-94, 5-96 through 102, 5-105 through 110, 5-112, 5-119 through 122, 5-124, 5-127, 5-130, 5-132, 5-133, 5-135, 5-136, 5-139, 6-1, 6-2, 6-7, 6-12, 7-1, 7-2, 7-5 through 7, 7-9 through 11, 7-13, 7-15, 8-1, 9-4, 9-5, 9-7, 9-11, 9-16, A-3, B-7, B-9, B-11, B-14, B-16, B-17, (Appendix C Report, iii, 3, 9, 12, 15, 20 through 22), (Appendix D Report, 6, 7, 9, 12, 15, 19, 20), E-11, E-16, F-3, F-8, F-21 through 32, F-36, F-42, F-46 through 52

#### **Transuranic Contamination**

B-3, (Appendix C Report, 11)

# Unavoidable Adverse Impacts

5-1, 5-119, 5-133

## **Uncertainty in Estimated Impacts**

4-13

## Vegetation

2-40, 2-62, 3-17 through 19, 3-23, 3-56, 5-36, 5-39, 5-40, 5-47, 5-48, 5-50, 5-51, 5-85, 5-118, 5-131, 9-12, 9-15, F-39

## Waste Management

1-21, 1-28, 2-29, 2-30, 2-41, 2-44 through 46, 2-64, 3-1, 3-31, 3-68, 5-4, 5-18, 5-31, 5-40, 5-56, 5-86, 5-118, 5-123, 5-125, 5-126, 5-130, 5-133, 5-136, 5-141, 6-9, 6-10, 7-3, 7-4, 7-6, 7-8, 8-1, 8-3, 9-16, B-3, B-11, (Appendix C Report, 4, 9, 15, 22, 23), (Appendix D Report, 7, 12, 17), F-40, F-42, F-47, F-48

### Wastewater

2-39, 3-14, 3-31, 3-33, 3-52, 3-68, 3-69, 5-37, 5-38, 5-40, 5-48, 5-82, 5-92, 6-7, 9-16, (Appendix D Report, 14, 17), F-4, F-40, F-41

# Water and Soil

2-39, 2-59, 5-15, 5-28, 5-37, 5-38, 5-48, 5-82, 5-117, 5-122, 5-128, 7-14, 8-3, (Appendix D Report, 7, 12, 13), F-35, F-51

# Water Resources

3-13, 3-52, 5-37, 6-6 through 8

## Wetlands

2-40, 2-63, 3-19, 3-20, 3-56, 5-17, 5-30, 5-39, 5-50, 5-53 through 55, 5-85, 5-86, 5-131, 6-7, 6-8, 7-15, 9-3, 9-12, 9-16, (Appendix C Report, 4, 22), (Appendix D Report, 7, 12, 16), F-39, F-40

# Wildlife

2-40, 2-63, 3-18, 3-56, 3-59, 5-39, 5-40, 5-50, 5-52, 5-85, 5-86, 5-133, 5-136, 6-12, 7-15, 9-3, (Appendix C Report, 13), F-39, F-40